

Material: TIN TETRACHLORIDE

Version 7.2 (GB) Print Date 18.10.2023 Date of last alteration: 17.10.2023

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Commercial product name: TIN TETRACHLORIDE

Product identifier: tin tetrachloride
CAS No.: 7646-78-8
EC-No.: 231-588-9
Index-No.: 050-001-00-5

REACH registration number: 01-2119474678-20-0000

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of substance / preparation:

Industrial.

Intermediate chemical

1.3 Details of the supplier of the safety data sheet

Manufacturer/distributor: Westlake Vinnolit GmbH & Co. KG

Street/POB-No.: Carl-Zeiss-Ring 25
Postal code/city: 85737 Ismaning
Country: Germany
Talenham: +40.89.96.103.0

Telephone: +49 89 96-103-0 Telefax: +49 89 96-103-103

Information about the Safety Data Sheet: Telephone +49 8679 3060-5680

eMail sdb@westlakevinnolit.com

1.4 Emergency telephone number

Emergency Information (German): Plant fire brigade +49 8677 83-2222 Emergency Information (internat.): National Response Center +49 621 60-43333

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008 as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567):

Classification	H-Code
Specific target organ toxicity - single exposure, Category 3	H335
Serious eye damage/eye irritation, Category 1	H318
Long-term (chronic) aquatic hazard, Category 3	H412
Skin corrosion/irritation, Category 1B	H314

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008 as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567):

Pictogram(s):





Signal Word: Danger

H-Code	Hazard Statements
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.



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P-Code	Precautionary Statements
P280	Wear protective gloves/protective clothing/eye protection.
P273	Avoid release to the environment.
P301 + P330 +	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P331	
P303 + P361 +	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P353	
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 +	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to
P338	do. Continue rinsing.
P310	Immediately call a POISON CENTER/ doctor.
P501	Dispose of contents/container to waste disposal.

Hazard ingredients (labelling):

tin tetrachloride

EC-No.: 231-588-9

2.3 Other hazards

No data available.

Endocrine disrupting properties - human health: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Endocrine disrupting properties - environment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

3.1.1 Chemical characteristics

CAS No.: 7646-78-8

metal salt

3.1.2 Hazardous ingredients

tin tetrachloride				<=100 %
CAS-No.: 7646-78-8	EC-No	o.: 231-588-9	Index-No.: 050-001-00-5	
INHA [1]				
Classification according to Reg (EC) No. 1272/2008*	julation	H335	/ H314; Aquatic Chronic 3 / H412; Eye D	Dam. 1 / H318; STOT SE 3 /
specific concentration limit: >= 5 %: STOT SE 3 / H335				

Type: INHA: ingredient, VERU: impurity

[1] = Hazardous or environmentally harmful substance; [2] = substance with a Community workplace exposure limit; [3] = PBT substance; [4] = vPvB substance; [5] = Endocrine disrupting properties

This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57) in amounts above ≥ 0.1%.

3.2 Mixtures

not applicable

SECTION 4: First aid measures

^{*}Classification codes are explained in section 16.



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4.1 Description of first aid measures

General information:

Take persons to a safe place. Observe self-protection for first aid. Always seek medical advice in the event of contact with this substance.

After contact with the eyes:

Rinse immediately with plenty of water for 10-15 minutes. Keep eyelids well open to rinse the whole eye surface and eyelids with water. Seek medical advice immediately and clearly identify substance. Continue to bathe eyes during transport to medical practitioner.

After contact with the skin:

Remove contaminated clothes at once. Wipe off excess material with cloth or paper. Wash off with plenty of water or water and soap immediately for 10-15 minutes. In serious cases, use emergency shower immediately. Seek medical advice immediately and clearly identify substance.

After inhalation:

Keep the patient calm. If unconscious place in stable sideways position. Protect against loss of body heat. If breathing stops, administer artificial respiration. Seek medical advice immediately and clearly identify substance.

After swallowing:

If conscious, give several small portions of water to drink. Do not induce vomiting. Seek medical advice immediately and clearly identify substance.

4.2 Most important symptoms and effects, both acute and delayed

Any relevant information can be found in other parts of this section.

4.3 Indication of any immediate medical attention and special treatment needed

After inhalation: treat as early as possible using cortisone spray. Medical checks necessary up to a latency period of at least 24 hours. In the event of 1st degree burns use corticoid-externa. In the case of 2nd degree burns, use symptomatic treatment. Further toxicology information in section 11 must be observed.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:

extinguishing powder, carbon dioxide.

Extinguishing media which must not be used for safety reasons:

water, foam.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products: hydrogen chloride .

5.3 Advice for firefighters

Special protective equipment for fire fighting:

Use respiratory protection independent of recirculated air.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment (see section 8). Avoid contact with eyes and skin.

6.2 Environmental precautions

Prevent material from entering sewers or surface waters.

6.3 Methods and material for containment and cleaning up

Absorb with a liquid binding material such as diatomaceous earth and dispose of according to local/state/federal regulations. Use neutralising agent.



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6.4 Reference to other sections

Relevant information in other sections has to be considered. This applies in particular for information given on personal protective equipment (section 8) and on disposal (section 13).

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions for safe handling:

Ensure adequate ventilation.

Precautions against fire and explosion:

No special precautions against fire and explosion required.

7.2 Conditions for safe storage, including any incompatibilities

Conditions for storage rooms and vessels:

Do not store in containers made of aluminum or other light metals.

Advice for storage of incompatible materials:

not applicable

Further information for storage:

Keep container tightly closed and store in a cool, well ventilated place. Protect against moisture.

7.3 Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Maximum airborne concentrations at the workplace:

Substance	Туре	mg/m³	ppm	Dust fract.	Fibre/m ³
Hydrogen chloride	OEL	2,0	1,0		
Hydrogen chloride	EU	8,0	5,0		

hydrogen chloride: the short-time exposure value of the EU threshold is 15 mg/m3 (= 10 ppm).

8.2 Exposure controls

8.2.1 Exposure in the work place limited and controlled

General protection and hygiene measures:

Avoid contact with eyes and skin. Do not breathe vapours. Wash hands at the end of work and before eating. Application of skin cream recommended to ensure optimum protection of skin.

Further information for system design and engineering measures

No special measures required.

Personal protection equipment:

Respiratory protection

Observe the equipment manufacturer's information and wear time limits for respirators.

If handled uncovered, use respiratory protective equipment.

Recommended Filter type: Gas filter type E (sulfur dioxide and other acidic gases and vapors), according to acknowledged standards such as EN 14387

For long or intense exposure, or for mist, spray or aerosol exposure, use respiratory protective equipment. Wear a self-contained, positive-pressure respirator with full facepiece and a protection factor (APF) of 2000, according to acknowledged standards such as EN 137, EN 14593 or EN 14594.



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Eye protection

protective goggles, according to acknowledged standards such as EN 166.

Hand protection

Use of protective gloves is recommended when handling the material, according to recognized standards such as EN374.

Recommended glove types: Protective gloves made of nitrile rubber

thickness of the material: 0,5 mm

Wearing time: 8 h

Breakthrough time: 480 min

Skin protection

Chemical protective clothing, according to acknowledged standards such as EN 13034, full-body liquid-tight protection if necessary, according to acknowledged standards such as EN 14605, if handled uncovered. Please observe the instructions regarding permeability time which are provided by the supplier. Wear PVC boots.

8.2.2 Exposure to the environment limited and controlled

Observe local waste water bye-laws for organo tin and tin compounds. Prevent material from entering surface waters and soil. Normally neutralisation is required before waste water is introduced into purification plants. Do not introduce large amounts into purification plants.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Property:	Value:	Method:
Physical state:	liquid	
Colour:	colourless	
Odour:	pungent	
Odour Threshold:	no data available	
Melting point:	-35,8 °C	
Boiling point/boiling range:	111 °C at 1013 hPa	
Lower explosion limit:	exempt	
Upper explosion limit:	exempt	
Flash point:	exempt	
Ignition temperature:	Not applicable.	
Thermal decomposition:	no data available	
pH:	0,2 at 20 °C (60 %)	
Viscosity, kinematic:	no data available	
Viscosity, dynamic:	0,9 mPa.s at 25 °C	
Water solubility:	Not applicable. Reacts violently with water.	
Partition coefficient: n-octanol/water:	no data available	
Vapour pressure:	106 hPa at 50 °C	
Vapour pressure:	20,7 hPa at 20 °C	
Density:	2,23 g/cm³ (20 °C)	
Relative vapour density:	exempt	
Particle Size Distribution:	Not applicable.	
Granulometry:	Not applicable.	

9.2 Other information

Solubility in water: Hydrolytic decomposition occurs. Explosion Limits: Not potentially explosive in accordance with European Commission Regulation (EC) No. 440/2008. The color may change during storage.

Property:	Va	alue:	Wethod:
riopeity.	V	alue.	vietilou.

Evaporation rate no data available Molecular weight no data available



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SECTION 10: Stability and reactivity

10.1 - 10.3 Reactivity; Chemical stability; Possibility of hazardous reactions

No decomposition if used in accordance with instructions.

Relevant information can possibly be found in other parts of this section.

10.4 Conditions to avoid

None known.

10.5 Incompatible materials

Reacts with: alcohols , metals , water . The reaction takes place with the formation of hydrogen chloride. Reacts violently with: alkali/alkaline earth metals .

10.6 Hazardous decomposition products

hydrogen chloride.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

11.1.1 Acute toxicity

Product details:

Exposure routes	Result/Effect
by inhalation	LC50 1,4 mg/l; 4 h
(vapour)	Species: Rat, Source: literature

11.1.2 Skin corrosion/irritation

Product details:

Corrosive

(Species: Rabbit, Source: Expert judgement)

11.1.3 Serious eye damage/eye irritation

Product details:

Corrosive

(Species: Rabbit, Source: Expert judgement)

11.1.4 Respiratory or skin sensitisation

Assessment:

For this endpoint no toxicological test data is available for the whole product.

11.1.5 Germ cell mutagenicity

Assessment:

For this endpoint no toxicological test data is available for the whole product.

negative

(Test system: mutation assay (in vitro) / bacterial cells, Method: OECD 471, Source: test report)

11.1.6 Carcinogenicity

Assessment:

For this endpoint no toxicological test data is available for the whole product.

11.1.7 Reproductive toxicity

Assessment:

For this endpoint no toxicological test data is available for the whole product.



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11.1.8 Specific target organ toxicity - single exposure

Assessment:

Irritating to respiratory system.

11.1.9 Specific target organ toxicity - repeated exposure

Assessment:

For this endpoint no toxicological test data is available for the whole product.

11.1.10 Aspiration hazard

Assessment:

For this endpoint no toxicological test data is available for the whole product.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

11.2.2 Further toxicological information

None known.

SECTION 12: Ecological information

12.1 Toxicity

Assessment:

Harmful effect through pH-shift.

Product details:

Result/Effect	Species/Test system	Source
LC50: > 1000 mg/l (nominal)	static test	test report
	Danio rerio (zebra fish) (96 h)	OECD 203
EC50: > 100 mg/l (nominal)	static test	test report
_ , , ,	Daphnia magna (Water flea) (48 h)	OECD 202
ErC50: > 100 mg/l (nominal)	static test	test report
	Pseudokirchneriella subcapitata (green algae) (72	OECD 201
	h)	
NOEC: < 1 mg/l (nominal)	static test	test report
- , , ,	Pseudokirchneriella subcapitata (green algae) (72	OECD 201
	h)	

12.2 Persistence and degradability

Assessment:

Hydrolytically instable. Contact with water liberates hydrochloric acid and tin dioxide.

12.3 Bioaccumulative potential

Assessment:

No data known.

12.4 Mobility in soil

Assessment:

No data known.



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12.5 Results of PBT and vPvB assessment

No data available.

12.6 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

none known

SECTION 13: Disposal considerations

13.1 Waste treatment methods

13.1.1 Material

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Recommendation:

Dispose of according to regulations by incineration in a special waste incinerator. Observe local/state/federal regulations.

13.1.2 Uncleaned packaging

Recommendation:

Uncontaminated containers should be recycled. Uncleaned packaging should be treated with the same precautions as the material.

13.1.3 Waste Disposal Legislation Ref.No.(EC)

It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

SECTION 14: Transport information

<u>olu</u>	11014 14. Transport information	
14.1	UN number or ID number	
	ADR :: RID :: IMDG :: ICAO/IATA ::	UN1827 UN1827
14.2	Proper shipping name	
	ADR	STANNIC CHLORIDE, ANHYDROUS Zinntetrachlorid, wasserfrei STANNIC CHLORIDE, ANHYDROUS Stannic chloride, anhydrous
14.3	Transport hazard class	
	ADR: RID: IMDG:	(Limited quantity (LQ): 1L) 8
	ICAO/IATA	8
14.4	Packing group	
	ADR	II II



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Environmental hazards

Environmentally hazardous: no Marine pollutant (IMDG): no

Special precautions for user

Relevant information in other sections has to be considered.

14.7 Maritime transport in bulk according to IMO instruments

Bulk transport in tankers is not intended.

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

National and local regulations must be observed.

For information on labelling please refer to section 2 of this document.

Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances (Seveso III):

Not applicable

Relevant regulations:

SI 2002/1689: CHIP Regulations 2002

SI 2002/2677: COSHH Řegulations 2002 SI 1999/3242: Management of Health & Safety at Work Regulations 1999

Health & Safety at Work Act 1974

SI 1993/1643: Environmental Protection Act 1993 & Subsidiary Regulations.

Other national and local measures relating to the workplace, pollution control, environmental protection and waste control.

Other specifications, restrictions and prohibitions:

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals: Not applicable

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors - ANNEX I. RESTRICTED EXPLOSIVES PRECURSORS: Not applicable

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors - ANNEX II. REPORTABLE EXPLOSIVES PRECURSORS: Not applicable

Details of international registration status

Relevant information about individual substance inventories, where available, is given below.

Japan: ENCS (Handbook of Existing and New Chemical Substances): This product is listed in, or complies with, the substance inventory. Australia AllC (Australian Inventory of Industrial Chemicals): This product is listed in, or complies with, the substance inventory.

China...... IECSC (Inventory of Existing Chemical Substances in China): This product is listed in, or complies with, the substance inventory.

Canada : DSL (Domestic Substance List):

This product is listed in, or complies with, the substance inventory.

This product is listed in, or complies with, the substance inventory.

United States of America (USA)...... TSCA (Toxic Substance Control Act Chemical Substance Inventory): All components of this product are listed as active or are in compliance with the

substance inventory.



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This product is listed in, or complies with, the substance inventory. General note: The Taiwanese chemicals regulation requires a phase 1 registration for TCSI-listed or TCSI-compliant substances if imports to Taiwan or manufacturing in Taiwan exceed the trigger quantity of 100 kg/a (for mixtures to be calculated per each ingredient). It is the duty of the importing/manufacturing legal entity to take care of this obligation.

European Economic Area (EEA)...... REACH (Regulation (EC) No 1907/2006):

This product is only intended and registered for uses as a transported isolated intermediate according to (EC) regulation 1907/2006, article 18.

For uses which are not in compliance with the use as intermediate, downstream users should proceed in compliance with the requirements of Art. 37 to 39 of (EC)

regulation 1907/2006 (REACH).

General note: the registration obligations for substances imported into the EEA or manufactured within the EEA by the supplier mentioned in section 1 are fulfilled by the said supplier. The registration obligations for substances imported into the EEA by customers or other downstream users must be fulfilled by the latter.

South Korea (Republic of Korea): **AREC** (Act on Registration and Evaluation of Chemicals; "K-REACH"): Please approach your regular contact for more detailed information.

15.2 Chemical safety assessment

A chemical safety assessment according to (EC) regulation 1907/2006 (REACH) has not been carried out for this product.

SECTION 16: Other information

16.1 Material

The details in this document are based on the state of our knowledge at the time of revision. They do not constitute an assurance of the described product properties in terms of statutory warranty requirements.

The providing of this document to a recipient does not relieve the recipient of his or her responsibility toward compliance with all laws and stipulations applicable to the product. This applies in particular to the further sale or distribution of the product or substances or items containing the product, in other jurisdictions and with regard to the protection of third-party intellectual property rights. If the described product is processed or mixed with other substances or materials, the details stated in this document cannot be conferred to the resultant new product unless this has been expressly mentioned. If the product is repackaged, the recipient is obligated to additionally provide the required safety-related information.

16.2 Further information:

Commas appearing in numerical data denote a decimal point. Vertical lines in the left-hand margin indicate changes compared with the previous version. This version supersedes all previous versions.

Key or legend to abbreviations and acronyms used in the safety data sheet

ABEK - Multi-Range Filter A, B, E, K; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; APF - Assigned Protection Factor; CAS No. - Chemical Abstracts Service Registry Number; DFG - German Research Foundation; DIN - German institute for standardization; DOC - Dissolved Organic Carbon; d/w - days per week; EC / CE / EG - European Community; EC50 / CE50 - Median effective concentration; ECHA - European Chemicals Agency; ED - endocrine disruptor; EG-RL - test method according to Regulation 440/2008; EN - European Standard; ERC - Environmental Release Category; g/cm3 gram per cubic centimeter; h - hour(s); H-Code - hazard statement code(s); hPa - Hectopascal; IATA Regs - International Air Transport Association (IATA) Dangerous Goods Regulations; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk;IC50 / Cl50 - half maximal inhibitory concentration;IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IMDG Code - International Maritime Dangerous Goods Code; ISO - International Organization for Standardization; LC50 / CL50 - medium lethal concentration; LD50 / DL50 medium lethal dose; LOAEC - Lowest Observed Adverse Effect Concentration; LOAEL - Lowest Observed Adverse Effect Level; MARPOL - International Convention for the Prevention of Marine Pollution from Ships; mg/g - milligrams per gram; mg/kg milligrams per kilogram; mg/l - milligrams per liter; mg/m³ - milligrams per cubic meter; min - minutes; mJ - millijoule; mm millimeter; mm²/s - square millimeter per second; mPa.s - Millipascal second(s); MSDS / SDB / SDS - safety data sheet; No Observed Adverse Effect Concentration; NOAEL - No Observed adverse effect level; NOEC - No Observed Effect Concentration; NOEL - No Observed Effect Level; OECD - Organization for Economic Cooperation and Development; PBT - persistent, bioaccumulative, toxic; PC - product category; P-Code - precautionary statement code(s); ppm - parts per million; PROC -



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process category; RCP - reciprocal calculation-based procedure; RID - convention concerning international carriage by rail; SU - sector of use; SVHC - substance of very high concern; Vol% - volume percent; UN No. - United Nations Dangerous Goods Number; vPvB - very Persistent, very Bioaccumulative

Explanation of the GHS classification code:

Skin Corr. 1B; H314 ...: Skin corrosion/irritation Category 1B; Causes severe skin burns and eye damage.

Aquatic Chronic 3; H412 : Long-term (chronic) aquatic hazard Category 3; Harmful to aquatic life with long lasting effects.

Eye Dam. 1; H318.....: Serious eye damage/eye irritation Category 1; Causes serious eye damage.

STOT SE 3; H335: Specific target organ toxicity - single exposure Category 3; May cause respiratory irritation.

- End of Safety Data Sheet -